

Patent  
Application No.: 10/820,252  
SFTGB Docket No.: 19308.0027U1  
03SKY0033

### AMENDMENTS

This listing of claims replaces all prior versions and listings of claims in the application.

- 1        1. (Currently amended) A system for synchronizing a portable  
2        transceiver to a network, comprising:  
3                a crystal oscillator;  
4                a frequency synthesizer adapted to receive an output of the crystal oscillator;  
5                logic coupled to the crystal oscillator, the logic configured to estimate a  
6        frequency error of a received signal, the frequency error determined by a comparison  
7        of the received signal from the network with the output of the crystal oscillator; and  
8                a first control signal supplied from the logic to the frequency synthesizer, the  
9        first control signal configured to adjust the frequency synthesizer to compensate for  
10      the frequency error.
  
- 1        2. (Original) The system of claim 1, further comprising:  
2                tuning circuitry coupled to the crystal oscillator, the tuning circuitry having a  
3        limited adjustment capability; and  
4                a second control signal supplied from the logic to the tuning circuitry, the  
5        second control signal configured to adjust the tuning circuitry, the tuning circuitry  
6        configured to compensate for the error.
  
- 1        3. (Original) The system of claim 2, wherein the adjustment of the  
2        frequency synthesizer adjusts the timing of the portable transceiver with respect to a  
3        communication network.
  
- 1        4. (Original) The system of claim 2, wherein the timing adjustment  
2        comprises adjusting the timing of a transmitter, a receiver, a coder/decoder  
3        (CODEC) and a sleep calibration element.

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1        5. (Original) The system of claim 3, wherein the tuning circuitry  
2 comprises a digital-to-analog converter.

1        6. (Original) The system of claim 3, wherein the tuning circuitry  
2 comprises a capacitance array.

1        7. (Original) The system of claim 6, wherein the capacitance array  
2 comprises fixed capacitance.

1        8. (Original) The system of claim 6, wherein the capacitance array  
2 comprises variable capacitance.

1        9. (Original) The system of claim 8, wherein the adjustment  
2 capability of the capacitance array can tune the system to between  $\pm 2$  parts per  
3 million (ppm) and  $\pm 2.5$  ppm with respect to the frequency and timing of the  
4 communication network.

1        10. (Currently amended) A method for synchronizing a portable  
2 transceiver to a network, comprising:  
3        determining a frequency error of a signal received by the portable transceiver  
4        when compared to a frequency generated within the portable transceiver; and  
5        if the frequency error is less than a predetermined value, adjusting the  
6        frequency of the system by adjusting a frequency synthesizer to compensate for the  
7        error.

1        11. (Original) The method of claim 10, further comprising:  
2        adjusting the frequency of the crystal oscillator by adjusting a tuning circuit  
3        associated with the crystal oscillator.

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1           12. (Original) The method of claim 11, wherein the adjustment of the  
2 frequency synthesizer adjusts the timing of the portable transceiver with respect to a  
3 communication network.

1           13. (Original) The method of claim 12, wherein the timing  
2 adjustment comprises adjusting the timing of a transmitter, a receiver, a  
3 coder/decoder (CODEC) and a sleep calibration element.

1           14. (Original) The method of claim 12, further comprising using a  
2 digital-to-analog converter (DAC) to adjust the frequency of the crystal oscillator.

1           15. (Original) The method of claim 12, further comprising using a  
2 capacitance array to adjust the frequency of the crystal oscillator.

1           16. (Original) The method of claim 15, further comprising using a  
2 fixed capacitance array.

1           17. (Original) The method of claim 15, further comprising using a  
2 variable capacitance array.

1           18. (Original) The method of claim 17, wherein the adjustment  
2 capability of the variable capacitance array tunes the system frequency to between  $\pm 2$   
3 parts per million (ppm) and  $\pm 2.5$  ppm of the frequency of the communication  
4 network.

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1           19. (Currently amended) A system for synchronizing a portable  
2 transceiver to a network, comprising:

3           means for determining a frequency error of a signal received by the portable  
4 transceiver when compared to a frequency generated within the portable transceiver;  
5 and

6           means for adjusting the frequency of the system by adjusting a frequency  
7 synthesizer to compensate for the frequency error if when the frequency error is less  
8 than a predetermined value.

1           20. (Original) The system of claim 19, further comprising:

2           means for adjusting the frequency of the crystal oscillator by adjusting a  
3 tuning circuit associated with the crystal oscillator.

1           21. (Original) The system of claim 20, wherein the adjustment of the  
2 frequency synthesizer adjusts the timing of the portable transceiver with respect to a  
3 communication network.

1           22. (Original) The system of claim 21, wherein the timing  
2 adjustment comprises adjusting the timing of a transmitter, a receiver, a  
3 coder/decoder (CODEC) and a sleep calibration element.

1           23. (Original) The system of claim 21, wherein the means for  
2 adjusting the frequency of the crystal oscillator comprises a digital-to-analog  
3 converter (DAC).

1           24. (Original) The system of claim 21, wherein the means for  
2 adjusting the frequency of the crystal oscillator comprises a capacitance array.

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1           25. (Original) The system of claim 24, wherein the capacitance array  
2 comprises a fixed capacitance array.

1           26. (Original) The system of claim 24, wherein the capacitance array  
2 comprises a variable capacitance array.

1           27. (Original) The system of claim 26, wherein the adjustment  
2 capability of the capacitance array tunes the system frequency to between  $\pm 2$  parts  
3 per million (ppm) and  $\pm 2.5$  ppm of the frequency of the communication network.